

**Review of the Draft Report Final Status Survey of the Former Naval Radiological Defense  
Laboratory Site, Hunters Point Naval Shipyard, San Francisco, California,  
July 2017**

**USEPA Comments dated November, 2017**

**GENERAL COMMENTS**

1. Section 4.3 (Reference Area) of the Draft Report Final Status Survey of the Former Naval Radiological Defense Laboratory (NRDL) Site (FSSR) states that twenty samples were collected systematically by another Navy contractor for use as a reference area population for data comparison and that the data were collected near Ship Berth 29 in Parcel D-1. However, the source of the data is not provided. Therefore it is unclear when the data was collected, which contractor collected the data, and whether the background data has been reviewed, validated, and approved for use by the regulatory agencies. As such, a conclusion that the NRDL site has met the release criteria is not substantiated by the information presented in the FSSR. Please revise the FSSR to reconcile information in the body of the document and Appendix B.
2. Section 4.5 (Determining the Number of Samples) includes a general discussion of how the number of required samples is determined using Multi-Agency Radiation Site Survey and Investigation Manual (MARSSIM) formulas; however, for completeness, this section should include the specific numbers used in the formulas. For instance, neither Section 4.5 or nor the Appendix A, Task Specific Plan Former NRDL Final Status Survey (TSP), list the standard deviation of the mean concentration for each of the radionuclides of concern (ROCs). They also do not provide a summary of the data from which the standard deviation for each set of ROC data was identified.
3. Section 5.3 (Systematic Soil Sampling) states that if sample results were greater than or equal to the Cesium-137 (Cs-137) or Strontium-90 (Sr-90) release criteria, they were analyzed for Plutonium-239 (Pu-239) by alpha spectroscopy, consistent with the Sampling and Analysis Plan (SAP). Sections 8.4.1 (Survey Unit NE), 8.4.2 (Survey Unit NW), 8.4.3 (Survey Unit SE), 8.4.5 (Survey Unit C2) all list results for Cs-137 which exceed the release criteria, yet the FSSR does not contain any results for Pu-239 analysis of any samples at the NRDL site. If Pu-239 analyses were not conducted, the FSSR is not compliant with the SAP and therefore has not provided sufficient data for free release. Please revise the FSSR to clarify whether any samples collected from the NRDL site were analyzed for Plutonium-239 and if so, to include this data in the FSSR.

**SPECIFIC COMMENTS**

1. **Section 3.4, Direct Application of Derived Concentration Guideline Levels, Page 8:** The first paragraph states, "Individual radionuclide results below the release criteria were considered to be free of contamination." However, the objective of the MARSSIM surveys/sampling is not to demonstrate that the area is completely free of contamination, but to demonstrate that the NRDL site meets the release criteria for the site ROCs as specified in the Hunter's Point Naval Shipyard Record of Decision (ROD) and, as such, is protective of human health and the environment. Therefore, the statement that confirming results are below the release criteria will ensure the site is free of

contamination is misleading and requires revision to more accurately represent the goal of the data collection project. Please revise the first paragraph in Section 3.4 to more accurately describe the goal of the MARSSIM FSS of demonstrating that the release criteria have been met as specified in the Hunter's Point Naval Shipyard ROD rather than stating the site will be free of contamination.

2. **Section 3.5, Investigation Levels, Page 8, and Exhibit 1, Former NRDL Site:** The last paragraph on page 8 refers to Exhibit 1 as depicting the area that was selected as a reference area to determine background levels of radionuclide contaminants of concern (COCs). However, the area described as the location adjacent to Ship Berth 29 is not labeled or identified by boundaries or shading on the map in Exhibit 1. Please revise Exhibit 1 to depict the location of the reference area.
3. **Section 4.3, Reference Area, Page 10:** The text should provide a more detailed justification for use of the background reference area near Ship Berth 29. The third paragraph on page 10 states that an area near Ship Berth 29 in Parcel D-1 was selected as the soil reference area because of geographical and physical similarities to the NRDL site and because it has no history of radiological use. However, the text should explain how it was determined that ships from Operation Crossroads did not impact Ship Berth 29, especially since it is known that other Ship Berths were contaminated by Operation Crossroads ships. Please revise Section 4.3 to provide additional information that substantiates the statement that Ship Berth 29 was non-impacted by site operations, or alternatively, propose another area that was not impacted by operations at the site.
4. **Section 4.4, Statistical Tests, Pages 10 and 11:** This section describes how MARSSIM was used for evaluating compliance with the release criteria when the COCs are in background. However, Section 1.5, Deviation from Planning Documents, states that individual analytical results were compared directly to the project release criteria to determine compliance, and therefore the Wilcoxon Rank Sum statistical test was not used. Please revise Section 4.4 to provide consistent information with Section 1.5 regarding the method of comparing data to the release criteria to determine compliance with the ROD.